

AMENDMENT:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer to the claimed and/or disclosed subject matter, and the assignee reserves the right to claim this subject matter and/or other disclosed subject matter in a continuing application.

Claim Listing:

Claim 1 (Currently Amended). ~~A scanning method by using a paper feed scanner, wherein the paper feed scanner comprises a sheet feeder attached thereon, a scanning head and a transmission mechanism, with the transmission mechanism driving the scanning head to scan a paper sheet sent from the sheet feeder to a scanning window of the scanner, the method comprising:~~

- ~~a) making the moving a paper sheet go forward a first distance into the towards a scanning window;~~
- ~~b) the scanning head scanning a portion of [[the]] said paper sheet with a scanning head;~~
- ~~c) the transmission mechanism driving the moving said scanning head to move a second distance in a first direction, wherein [[the]] said second distance is smaller than [[the]] said first distance; and~~
- ~~d) repeating the steps b) and c) repeating said scanning and said moving said scanning head to scan until the scanning head completely scans a plurality of portions of [[the]] said paper sheet over in the said scanning window[[:]].~~
- ~~e) repeating the steps a), b), c) and d) except that the scanning head moves in a second direction opposite to the first said first direction;~~
- ~~f) repeating the steps a), b), c), d) and e), the movement of the scanning head alternating alternates between said [[a]] first and said [[a]] second direction, until [[the]] said scanning head completely scans [[the]] said paper sheet to be scanned.~~

Claim 2 (Currently amended). The method of claim 1, ~~wherein the scanning head moves back and forth to scan the paper sheet and further comprising repeating said scanning, said moving said scanning head, and said repeating, wherein movement of said scanning head alternates between said first direction and a second direction, until said scanning head scans a plurality of portions of said paper sheet.~~

Claim 3 (Currently amended). The method of claim 1, ~~wherein the scanning head moves in one way a single scanning direction to scan the paper sheet, and further comprising repeating said scanning, said moving said scanning head, and said repeating, wherein said moving said scanning head comprises moving said scanning head moves in a second direction opposite to the first-said first direction~~

Claim 4 (Currently amended). The method of claim 1, ~~wherein the sheet feeder comprises a conveying guide, and a plurality of rollers arranged on the conveying guide and in contact with each other to make a pair of rollers, and wherein the paper sheet is transmitted along the moving said paper sheet comprises conveying guide by rotating [[the]] a pair of rollers, wherein said pair of rollers are positioned on a conveying guide of a sheet feeder.~~

Claim 5. (Currently amended) The method of claim 1, ~~wherein the sheet feeder comprises a scanning window through which the scanning head scans the paper sheet, and the a length of [[the]] said scanning window in the moving direction of the paper is larger than or equal to [[the]] said first distance.~~

Claim 6. (Currently amended) A ~~scanning method by using a sheet feed scanner, the method comprising:~~

a) ~~making the moving a paper sheet go forward a first distance into the over a scanning window;~~

~~b) the scanning head in an original position scanning a portion of [[the]] said paper sheet with a scanning head in an original position;~~

~~e) the scanning head moving moving said scanning head a second distance, wherein the second distance is smaller than the first distance;~~

~~and d) repeating the steps b) and e); repeating said scanning and said moving said scanning head until [[the]] said scanning head completely scans a plurality of portions of [[the]] said paper sheet in the over said scanning window[[.]];~~

~~e) the scanning head returning said scanning head to [[the]] said original position; and~~

~~repeating steps a), b), e) and d) said moving said paper sheet, said scanning, said moving said scanning head, and said repeating until the entire said paper sheet is substantially scanned. [[.]]~~

Claim 7 (Currently amended). The method of claim 6, wherein said scanning head moves back and forth to scan said paper sheet the second distance is smaller than the first distance.

Claim 8 (Currently amended). A scanning method in which a scanning head scans a paper sheet located in a scanning window, the scanning method comprising:

~~a) making the moving a paper sheet go forward a first distance at least partially onto a scanning window;~~

~~b) the scanning head scanning a portion of [[the]] said paper sheet with a scanning head;~~

~~e) the scanning head moving said scanning head a second distance in a first direction, wherein [[the]] said second distance is smaller than [[the]] said first distance; and~~

~~d) repeating the steps b) and e); repeating said scanning and said moving said second distance until [[the]] said scanning head completely scans a plurality of the portions of [[the]] said paper sheet on said scanning window. in the scanning region;~~

~~and e) repeating the steps a), b), e) and d) except that the scanning head moves in a second direction opposite to the first, f) repeating the steps a), b), e), d) and e), the movement of the scanning head alternating between a first and a second direction, until the scanning head completely scans the paper sheet to be scanned.~~

Claim 9. (Currently amended) The method of claim 8, ~~wherein the scanning head moves back and forth to scan the paper sheet repeating said moving the paper sheet, said scanning, said moving said second distance, and said repeating, wherein said scanning head alternates between moving in said first direction and in a second direction, and wherein said second direction is opposite said first direction.~~

Claim 10. (Currently amended). The method of claim 8, wherein the scanning head moves in ~~[[one]]~~ a scanning direction to scan ~~[[the]]~~ said paper sheet.

Claim 11 (New) A system comprising:

a sheet feeder capable of moving a paper sheet a first distance over a scanning window;
a scanning head capable of scanning a portion of said paper sheet over said scanning window;

a stepping motor capable of moving said scanning head a second distance in a first direction, wherein said second distance is smaller than said first distance; and

wherein said scanning head is further capable of scanning a second portion of said paper sheet over said scanning window.

Claim 12 (New). A system of claim 11, wherein said sheet feeder is further capable of moving said paper sheet further over said scanning window and said scanning head is further capable of scanning a third portion of said paper sheet over said scanning window, and wherein said stepping motor is further capable of again moving said scanning head said second distance in said first direction.

Claim 13 (New) The system of claim 12, wherein said scanning head is further capable of moving back and forth in a scanning direction to scan said paper sheet.

Claim 14 (New). The system of claim 12, wherein said sheet feeder comprises a conveying guide, and

a plurality of rollers arranged on said conveying guide, and wherein at least two of said plurality of rollers are in contact with each other, such that said paper sheet may be moved at least in part by rotating the at least two of said plurality of rollers.

Claim 15. (New) The system of claim 12, wherein a dimension of said scanning window is larger than or equal to said first distance.

Claim 16 (New) An apparatus comprising:

means for moving a paper sheet a first distance over a scanning window;

means for scanning a portion of said paper sheet over said scanning window;

means for moving said means for scanning a second distance in a first direction, wherein said second distance is smaller than said first distance; and

said means for scanning further including a means for scanning a second portion of said paper sheet over said scanning window.

Claim 17 (New). The apparatus of claim 16; and further comprising:

said means for moving said paper sheet further including means for moving said paper sheet further over said scanning window;

said means for scanning further including a means for scanning a third portion of said paper sheet over said scanning window; and

said means for moving said means for scanning further including means for again moving said means for scanning said second distance in said first direction.

Claim 18 (New) The apparatus of claim 16, and further comprising means for moving said means for scanning back and forth in a scanning direction to scan said paper sheet.

Claim 19. (New) The apparatus of claim 16, wherein a dimension of said scanning window is larger than or equal to said first distance.

Claim 20 (New) A method comprising:

moving a paper sheet a first distance over a scanning window;
with a scanning head, scanning a portion of said paper sheet over said scanning window;
moving said scanning head a second distance in a first direction, wherein said second distance is smaller than said first distance; and
scanning a second portion of said paper sheet over said scanning window.

Claim 21 (New). The method of claim 20, and further comprising:

moving said paper sheet further over said scanning window;
with said scanning head, scanning a third portion of said paper sheet over said scanning window;
moving said scanning head said second distance in said first direction again; and
scanning a fourth portion of said paper sheet.

Claim 22 (New) The method of claim 21, and further comprising moving said scanning head back and forth in a scanning direction to scan said paper sheet.

Claim 23 (New). The method of claim 21, wherein moving a paper sheet comprises rotating at least two of a plurality of rollers, wherein said plurality of rollers are at least in part coupled to a sheet feeder.

Claim 24. (New) The method of claim 21, wherein a dimension of said scanning window is larger than or equal to said first distance.